

**STRATEGY AND WORK PLAN**  
**FOR THE IMPLEMENTATION OF**  
**LAND AND PROPERTY TAXES AND**  
**THE CREATION OF A MODERN FISCAL CADASTRE IN**  
**THE REPUBLIC OF ARMENIA**

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## I. PLAN OVERVIEW

This report presents my recommended strategy and work plan for creating a fiscal cadastre and for implementing land and property taxes in the Republic of Armenia. It essentially has three parts: (1) this chapter (an overview); (2) chapters II through V, which address the things the government must do to create an environment for success; and (3) chapters VI and VII, which outline general management responsibilities.

The strategy and work plan are incomplete and should evolve as progress is made and as decisions are made by the government. A companion report [citation] addresses the major components of the overall system and constitutes a prototype of a manual for land and property tax administration in the Republic of Armenia. It, too, should be revised and expanded as progress is made. To manage the changes better, I recommend a strategic planning approach (see section VI,B,1).

This chapter presents an overview of the implementation plan. It expands on the plan presented in my earlier report, "Implementing Land and Property Taxes and Creating a Fiscal Cadastre in the Republic of Armenia" (Almy 1994a).

Economic circumstances in Armenia dictate an evolutionary development of cadastral record and property (broadly defined here to include land, buildings, and certain movable property) tax systems. Consequently, my recommended plan has three broad phases: (1) an initial phase, (2) a transitional or developmental phase, and (3) a mature operational phase. The State Tax Inspectorate has a complementary view of tax system development. Phase 1 would see the normative basis to implement existing tax system being put into place, and problems with the existing system would be solved in phase 2 (such as a better mechanism for collection) through revised legislation and normative acts. Phase 3 would be a market economy phase (with fiscal cadastre).

Each phase will have common tasks, such as planning and budgeting (estimating work loads, production rates, and available and needed resources). A major task will be scheduling—dividing the overall project or process into smaller tasks and activities, noting dependencies, and graphing for clarity.

[generalized Gantt chart and timetable?]

### A. INITIAL PHASE

The initial phase of the recommended implementation plan has three main objectives: (1) secure the commitments discussed in

chapter II, (2) implement the land tax and the property tax as envisaged in the current land tax law and in the draft property tax law (discussed further in chapter III), and (3) plan for phase 2, during which a workable fiscal cadastre would be built.

Notes on the steps: (1) assign lead agency, (2) create multi-agency working group chaired by the lead agency, (3) begin planning, focusing on specific needs and on resource requirements. There is a need to secure ongoing high-level political support, backed by resource commitments. There is a need to develop an institutional culture that emphasizes openness.

The plan for completing the transitional phase should be made early in phase 1 (see section B, below).

#### B. TRANSITIONAL PHASE

A first-generation fiscal cadastre would be created during phase 2, the transitional phase. Its goals would be to broaden coverage of the taxes and, to the extent that market conditions permit, refine valuation procedures. The phase 1 property tax system would continue in operation, perhaps with refinements designed to improve equity and efficiency and to smooth the transition to a cadastre-based system with more realistic valuations being made.

A major phase 2 activity would be to delineate parcels on work maps. Next, a unique cadastral number would be assigned to each parcel. That number would be used to link parcels, buildings, and interests in property. A field canvass would be required to complete the cadastre. Recent work by inventory offices and Giprozem should not be duplicated.

Phase 2 should begin in the second year of the proposed taxes on land and property. It would require establishment of institutions capable of maintaining the fiscal cadastre and carrying out an ongoing valuation program.

[move?]

a. Development of the Fiscal Cadastre : It will be necessary to:

- Evaluate cadastral mapping requirements
- Initiate mapping program

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- Build complete owner and user registers
- Evaluate valuation data requirements and define data elements (continuing AURI research)
- Define new data files
- Prepare coding and valuation manuals and forms
- Convert or collect data

Data collection activities will evolve as the fiscal cadastre is developed. A field canvass will be necessary to ensure that every building and assessable improvement is located on the correct parcel and is accurately described.

It will be necessary to develop and put into operation change-handling procedures designed to renew the cadastre as new privately owned parcels are created, as new buildings are constructed, and buildings are demolished.

b. Development of the Valuation Program : The development of the valuation program will be an outgrowth of market monitoring. From observations of market data, better valuation methods will be developed. It will be necessary to specify valuation methods and prepare manuals, forms, and the like covering agricultural land, urban land, buildings, and other taxable property (business movable property).

A major developmental activity will be the design of systems and procedures. This work involves identifying needs, evaluating alternative solutions, and choosing the best solution in the circumstances. The best solution often will not be the most technically sophisticated. In addition to design activities, manuals and forms must be prepared.

Technical assistance may be desirable.

#### C. MATURE PHASE

The "mature" or operational phase would begin when the modern fiscal cadastre is complete. Each year in this phase, records created during the transitional phase would be updated as necessary. Records on newly privatized land and property would be added. New information on market values would be analyzed. Additional information needed for better valuations may be added. Responsibilities may be reassigned.

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If they are not produced in phase 2, digital cadastral maps should be produced in phase 3.

[Note: the following are rough notes only.] This section ... Need to lay out in as much detail as possible, suggesting responsibilities, and considering sequences, resource requirements, etc. Try to develop Gantt or PERT charts.

incorporate notion of principles

Working group>user requirements> specs. Decide who will pay.

Doodle during Morton mtg: (a variant on IRPA figure?)

Market monitoring with	Tax system & valuation
valuation	
Making mkts open/ transparent	

Taxes as a means of providing  
public services which enhance  
property value

## II. GOVERNMENT COMMITMENT

The creation of a fiscal cadastre and the successful introduction of taxes on land and property are difficult, complex tasks. Although technical experts will be responsible for most of the work, achieving project objectives will require high-level political support to create an environment for success. Without sufficient political support, the work of technical experts will count for naught. Political support is needed to:

- Establish a proper legal framework (see chapter III)
- Erect a workable institutional structure and resolve bureaucratic problems as they arise (chapter IV)
- Allocate sufficient resources (chapter V)
- Ensure system integrity and openness and ensure credible enforcement of taxes (chapter VI)

As to the last point, openness is a characteristic of democratic government and well-functioning immovable property markets. Ownership records in the legal cadastre should be public. Declared prices should be public, even if they are inaccurate. Immovable property tax valuations and tax assessments should open for general public inspection. Openness provides two types of benefits. Errors and questionable practices are more easily detected and corrected. Fairness and correct practices can be more easily demonstrated.

Openness is passive. Active measures will need to be taken to ensure system integrity and to guard against corrupt practices. On a high plane, these include the establishment of a strong judiciary and a free press. On a lower plane, these include the internal controls discussed in chapter VI. The performance of the [property tax administration] should be subject to external audit. There should be a property tax appeal mechanism.

Initial commitments will need to be made at the outset of phase 1 of the implementation plan. Commitments will need to be renewed in phases 2 and 3.

The commitment already shown by the government is encouraging. Evidence of this commitment includes the widespread support for the creation of a fiscal cadastre and the [working group]. However, some fear that the cost of implementing urban land and property tax systems may be an obstacle for parliament, as



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previously all taxes have produced revenues in excess of implementation costs.

### III. LEGAL FRAMEWORK

This chapter addresses the legal framework for taxing land, buildings, and other property. By legal framework I mean the body of laws and regulations that lay out policy choices, provide the environment for their achievement, and assign responsibilities (see also chapter IV). The success of the property tax system will also depend on the legal framework for (1) establishing and protecting private rights to immovable property and (2) fostering immovable property markets. These topics generally are beyond the scope of my responsibility and are addressed by others (see Mousheghian and Soghomonian, "The Concept of the Republic of Armenia's Urban Land Cadastre," and other references). However, I would like to identify some areas of concern.

Relative to the first area of need, the revised land code and other acts should:

- Establish the general legal framework for private property ownership (creating, transferring, protecting), particularly with respect to non-agricultural land.
- Reserve certain property rights to the state, including the rights to impose land use controls for the common good and to tax immovable property.
- Mandate the creation of an immovable property cadastre, providing for the registration of private rights to land and buildings encompassing both agricultural and urban land.
- Assign roles and responsibilities for cadastre maintenance.

Relative to the second area, legal action is needed to finalize and adopt an interim procedure for selling land. See AURI 1993a. This would be dependent on the starting price regulation. The land auction AURI has mentioned as a priority project may be dependent on both. In addition, there is a need to create institutions and structures for mortgaging immovable property.

An additional area of need is to create the legal and institutional structure for accurate disclosure of sale price data (see annex 3 in Almy, "Implementing Land and Property Taxes and Creating a Fiscal Cadastre in the Republic of Armenia").

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Work modifying or elaborating existing legislation should begin early in phase 1 of the implementation plan. This work would include finalizing and adopting regulations regarding starting prices for standard housing units and land parcels. See AURI 1993b. The starting price concept will need to be expanded to other types of property.

issues

[possible topics include illegal construction--DeSoto bringing legal rights into line with informal rights--compulsory sale at declared price as an enforcement tool.]

Separate land and building taxes versus a unified tax. Among the issues being considered by the State Tax Inspectorate is whether there should be a unified law on the taxation of land, buildings, and other property. The question boils down to: must Armenia work toward a unified land and building tax law or is it acceptable to continue with separate land and property taxes? I said there were potential advantages to a unified tax, including:

- Less public confusion
- Simpler, less costly administration
- Easier to shape a coherent tax policy

I agreed that the current situation (limited private ownership of land, inadequate to nonexistent cadastres) made the development of separate taxes sensible. I noted that other former communist countries had taken the same course (for example the Czech and Slovak republics). I concluded that this was not an important issue.

A follow-up question had to do whether it would be sensible to have a unified tax on family houses and land. I agreed that it would.

There may be long term advantages to separate taxes, especially if one is an advocate of Georgist principles.

[Consider doing a chart of the two laws to illustrate their similarities and differences and to suggest how they could be unified.]

Land and property taxes considered "revolutionary" (novel) by Parliament, hence caution and delays in adoption.

A. THE LAW ON LAND TAX

The Law on Land Tax was adopted by Parliament in about April. Based on a quick translation, it appears very similar to the draft I reviewed last November. All of the changes appear to be for the better. The State Tax Inspectorate has prepared implementation materials, which I also reviewed.

1. Agricultural Land

Mechanisms are in place to assess and collect taxes on agricultural land. These taxes are based on hypothetical net incomes based on soil class and other factors as estimated by a research institute in the Ministry of Agriculture. The Ministry of Economy assists with commodity price figures. The Government has approved the Ministry's book of per-hectare cadastral net income values.

Both Giprozem (the institute of the Ministry of Agriculture responsible for the agricultural land cadastre) and the State Tax Inspectorate recognize the possibility of inaccurate land area calculations, due to Giprozem's limited resources. If an owner wants an accurate survey, the owner must hire a private surveyor.

Giprozem recognizes the need to improve estimates of soil productivity and crop yields. At present there is only one (the most typical) soil quality rating per cadastral district. It would be desirable to evaluate each parcel separately.

Both Giprozem and the Tax Inspectorate recognize the net incomes into line with current market levels. At present old state farm standards are indexed to bring them closer to market prices. The Tax Inspectorate sees a need to improve the index by developing a composite index that reflects price changes in a "market basket" of inputs. Giprozem would go a step farther and use market commodity prices and production costs (such as seed, fertilizer, fuel, labor, and transport to market) to better reflect net incomes of each soil type.

The State Tax Inspectorate has a well designed procedure for collecting agricultural land taxes. As it has been collecting an agricultural profits tax (with compliance approaching 100 percent), it has a preliminary list of taxpayers. The list of taxpayers eventually will include registered agricultural land owners, 28,000 collectives, and family house plots. In addition, there are 1,100 state enterprises. The Tax Inspectorate reckons it has identified about 95 percent of all taxpayers.

Even though the Tax Inspectorate thinks it has a good list of agricultural taxpayers now, it believes keeping abreast of changes may be problematic. Most agricultural land owners possess only temporary allotment decision documents issued by local councils. Some owners may be unaware of the decision. Some users may not be recognized by local councils. Councils also sometimes change allotment decisions. The Ministry of Agriculture is said to have issued only 2,000 certificates (passports). As privatization committees now are being disbanded, it is unclear who will control the distribution of land in the future.

The Inspectorate plans to distribute taxpayer/property record forms in the autumn. It will go to villages and meet with the local council and others to get information on owners. It will complete the forms of physical persons. A tax bill will be sent to taxpayer, although the delivery mechanism is uncertain due to unreliability of postal service. The Tax Inspectorate may deliver bills in person at a local council meeting called for the purpose. It will obtain receipt of delivery. This has to take place by September 1st. Instructions have been delivered to regional offices. The Tax Inspectorate hopes to develop a more efficient means of distributing forms in the future.

The procedure allows taxpayers to review the Tax Inspectorate's calculations. If the taxpayer agrees, the taxes will become due. If the taxpayer disagrees, he or she may request that the Tax Inspectorate re-measure the plot or make other corrections. Agricultural land assessment forms will be reviewed annually.

The agricultural taxpayer (farmer) may pay on the spot and be issued a receipt. The Tax Inspectorate would prefer a bank transaction but few farmers have bank accounts. One-half of agricultural land taxes is due on November 15th.

The Tax Inspectorate regards agricultural land taxes as being sufficient to train farmers to pay taxes and to allow the government to gain experience in developing cadastral and tax administration systems. However, the tax is a minor source of revenue. The Tax Inspectorate expects to collect about 2 billion drams.

## 2. Non-Agricultural Land

The Law on Land Tax is silent on the basis for cadastral values of non-agricultural land. As the State Tax Inspectorate

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has general responsibility for the administration of the land tax under article 19 of the Law, it has taken the position that, AURI's starting price proposal notwithstanding, it is legally obliged use the method spelled out in the socialist-era decision 251 concerning the old land code until the Government approves a new method. Decision 251 establishes two classes of "unused" agricultural land. The Ministry of Agriculture has established per-square-meter "net income" and cadastral values for both. It recognizes that this method would result negligible tax revenues (revenues on the order of 15 rubles per square meter).

The Government realizes the shortcomings of decision 251 in the present situation and has ordered the Tax Inspectorate, the Ministry of Finance, the Ministry of the Economy, and the Ministry of Agriculture to come up with a proposal.

AURI's starting price proposal clearly is conceptually superior to decision 251. Implementation of it would require that zone boundaries be fixed precisely and entered into cadastral records.

#### B. THE LAW ON PROPERTY TAX

Contrary to my earlier expectations, the Law on Property Tax was still before Parliament in July 1994. The State Tax Inspectorate wanted by views on the latest draft of it and on draft decisions and regulations.

Re 370 (?) decision, inventory bureaus have circa 1982 cost figures, based on old norms. Were for insurance purposes. Table of construction class and building types. May not be too far out of date to be re-calibrated.

Summarize relative advantages of area- and value-based immovable property taxes.

Art. 6. Law versus methodology of not taxing land under buildings. Land under buildings is exempt (this may be a proposal) on the grounds that buildings are taxed at higher rates.

If STI discovers discrepancy, who should resolve? STI does not want to "sanction" an "illegal act."

The Direct Tax Department deals with the income tax and the deductibility of property taxes arises. The land tax law exempts ag land taxpayers from other taxes. I may have this backwards.

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Some large enterprises are excepted. Problem of harmonizing taxes (in Parliament).

STI will draft (has drafted?--reference to Mousheghian arguing) normative acts. Circulate for review and argument.

Art 3(b). Passport system provides information about number of family members. A person can own many flats. (850) Income test applies only once per person.

Subdividing a flat may expand the number of owners eligible for the income test. Regulations probably will be used to close loophole.

Information is/will be collected by regional tax inspectors, assembled in central information bank. One tax bill in region where registered. Have elaborated forms. Identified data needs. Have developed short explanatory piece explaining tax and rights and responsibilities. Estimated 300,000 taxpayers of all types. 50,000 added annually.

Art. 6. Data flow: Inventory office to tax office (assessment made) notice to citizens

Recommend that failure to receive notice does not absolve taxpayer of responsibility to declare and pay taxes.

Enforcement strategy not fully worked out, reason for step-by-step strategy, and this is a second-stage issue. Possibility of collecting monthly as with rents, water, electricity, etc. by "cashiers." Need for mass payment system.

Concerns about evicting people from homes. As with Anlian, interest in tax relief mechanisms (circuit breakers, grants, deferrals, outright forgiveness). Detail in report. Consider high interest rate and inflation problems.

Law is silent on distribution of property tax revenues. Now, when MoF approves budget, it decides how much goes to locals. Put allocation in law?

Garages, illegal constructions are problematic (use public lands such as courtyards, playgrounds). Not very valuable, but owners are comparatively rich. Wants to use tax system to punish, since will to demolish is lacking, but doesn't want to legalize/legitimize by registering and taxing. RA: Establish two

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classes: illegals before and after certain date. "Amnesty" for earlier.

Re exemptions: Special registry of organizations eligible for exemptions. (See 25 Jul notes, page 5.)

Art. 12. Now consolidated state and local budget. (Comment on accountability and need own source of revenue.) But fear locals would create own exemptions. Who you know rather than what you need. (More a problem of villages?) PILOT?

Semantics(?). Budgetary organization = government. Enterprise + for-profit. Corporation = nonprofit. (?)

Question re livestock census and evaluation relative to exemption. "Forfetter" (a French/german) tax term. Related to holdings eligible for exemption. Want to stimulate cattle breeding.

Depreciation of buildings and equipment acquired before 1991 (see notes--25 Jul, page 7).



#### IV. INSTITUTIONAL STRUCTURE

The successful introduction of broad-based taxes on land and other property will require an appropriate institutional structure. The governmental officials I met recognize this. At the same time, they are properly reluctant to exceed the scope of their existing authority. Among the issues that need to be addressed are: responsibility for the legal cadastre(s), responsibility for valuation, and coordination of the various agencies with an interest in cadastral record systems and taxation of land and other property. I address responsibility for valuation and interagency coordination in this chapter.

Initial decisions about the institutional structure will need to be made early in phase 1 of the implementation plan.

##### A. RESPONSIBILITY FOR VALUATION

Deciding responsibility for valuation is urgent because the current situation is confused. The Ministry of Agriculture is responsible for agricultural net income values. The Law on Land Tax is silent on who is responsible for non-agricultural land values. The draft Law on Property Tax prepared by the State Tax Inspectorate would make the inventory offices responsible for valuing "property." Although more than one organization could be responsible for developing valuation models, I believe only one organization should be responsible for the application of models to individual properties. To do otherwise would be inefficient and the probability of inaccurate valuations and inequitable property taxation would increase greatly.

The choice as to which organization should be responsible for valuation is not clear. The building inventory offices, the State Committee on Architecture and Urban Planning, the State Tax Inspectorate, a new organization, or a combination of organizations might be made responsible for valuation. There are advantages and disadvantages to each. International experience reveals many different organizational arrangements, but the ingredients of success (or failure) are not always clear.

This section identifies some of the principles that can be used in deciding responsibility. As will be seen, some of the principles are in conflict. I also discuss the advantages and disadvantages of assigning responsibility for valuation to the various agencies identified above.

For reasons that will be identified below, I prefer assigning responsibility for valuation to the State Tax Inspectorate. However, my preference may not be popular with either the Tax Inspectorate or the other agencies that might be made responsible for valuation.

# 1. Principles

Following are principles have been used to justify the assignment of responsibility for valuation in other countries.

- Adequate resources . The agency responsible for valuation should be able to command the resources needed to carry out its functions. In particular, the agency should possess expertise in valuation. Application of this principle would suggest that valuation should be the responsibility of the central government, although the City of Yerevan also could be responsible for the valuation of land and buildings in its territory. Many small towns and sparsely populated regions would be too small to afford the staff and equipment needed for valuation.
- A stake in the outcome . Some would argue that valuation should be the responsibility of an agency in a unit of government responsible for providing important governmental services financed in significant part from taxes on land and property. This principle complements the first and would suggest that a central government agency such as the State Tax Inspectorate should be made responsible for valuation. If revenues from land and property taxes later were assigned to local authorities, a different assignment of responsibility might be warranted.
- Independence and objectivity . Others would argue that responsibility for valuation should be assigned to an agency that is disinterested in the amount of taxes or in the allocation of tax burdens that results from the valuation exercise. That is, the agency should be free to value land and other property as objectively as possible and not be subjected to temptations to value property in a biased manner. This principle directly contradicts the second. As a practical matter, it may be incompatible with the first. A new independent valuation agency would provide the greatest degree of independence. However, international experience re-

veals that it is possible to provide sufficient independence administratively in many types of organization.

- A service delivery orientation . Functions can be divided into "line" and "staff" functions. In a governmental context, an organization with a "line" function is directly responsible for the delivery of a service, such as title registration. An organization with a "staff" function provides support, such as city planning. Line functions are organized to deal directly with the public. Valuation should be seen primarily as a direct public "service"—the service being information on land and property values, a database used in territorial planning and other public and private purposes, and, *foremost*, the equitable distribution of land and property taxes.
- Organizational simplicity . The simpler the organization of government, the easier coordination and communications among agencies will be. This principle implies that a single organization should be responsible for the valuation for tax purposes of agricultural land, urban land, buildings, and other taxable property. It also suggests that a new agency should not be created unless doing so simplifies other aspects of governmental organization.
- Professional traditions . The agency responsible for valuation should be one naturally aligned with the profession responsible for valuation in the country. Professions responsible for valuation include architecture, economics, and surveying. If I understand the situation in Armenia correctly, architecture is the profession normally responsible for valuation (Spain is another example). In the United States, valuation has been a specialized profession that is now becoming more closely aligned with economics, which is the profession valuers are a part of in Denmark and Sweden. In the United Kingdom, Germany, and other countries, valuers are part of the surveying profession.
- Technology . Technology can affect organizational patterns. At one time it was thought desirable to centralize computer systems, which would imply a centralized valuation service and property tax administration. Now the opposite is true, computer systems are

highly decentralized. Through computer networks and "relational database management systems," it is possible for data to cross organizational boundaries effortlessly, with each organization remaining in control of the data for which it is responsible. A control or oversight function would be required in such a technological environment to ensure that valuation standards and property tax policies were uniformly followed.

## 2. Evaluation of Alternatives

I list below organizations in Armenia that could be made responsible for valuation in my order of preference.

a. State Tax Inspectorate : As it now has responsibility for tax administration, the State Tax Inspectorate fully realizes the importance of a proper legal framework, practical administration, and public acceptance in the ultimate success of a new tax regime. It has assembled an excellent team responsible for the development of methods. The team has a realistic picture of the Tax Inspectorate's strengths and weaknesses, including its lack of experience in valuation. The Tax Inspectorate also has an established network of regional offices. As its major purpose is revenue collection, it would seem to be capable of commanding the resources to carry out a valuation program successfully.

Along with its lack of experience in valuation, the Tax Inspectorate may have an "image" problem. Some may see it as being too inflexible and legalistic to succeed with the subjective nature of valuation.

If the State Tax Inspectorate is given responsibility for valuation, I believe it should reorganize internally and create a valuation division (I would make this same recommendation to all existing organizations).

b. State Committee on Community Services and the Yerevan Inventory Office : Together, the two inventory agencies cover the territory of Armenia. They are entrepreneurial and service oriented. They also have the advantage of being a main repository of data on buildings. As they now maintain information on building ownership, they are a logical choice for having the responsibility for the legal cadastre. They also receive information on declared prices of property. The Tax Inspectorate has suggested that inventory offices should be responsible for property valuation.

As with the Tax Inspectorate, the inventory offices have no experience with valuation. There also is a view that the service of maintaining the legal cadastre should be independent of the service of tax administration largely for psychological reasons (see Holstein 1993). A final disadvantage is that, as there are two agencies involved, their work would have to be supervised to ensure that values were of uniform accuracy. (I would point out, however, that at least two Canadian provinces divide responsibility for valuation between valuation offices in major cities and a valuation office responsible for the balance of the territory of the province.)

c. State Committee on Architecture and Urban Planning: As previously noted, architecture is the profession in Armenia traditionally concerned with the "value" of various land uses. Building on this legacy, the Armenian Urban Research Institute (AURI), an organization under the supervision of the committee, has developed considerable expertise in cadastral systems and in land and building valuation. AURI could serve as the nucleus of a valuation service.

The State Committee on Architecture is a sprawling organization providing many important functions concerned generally with the quality of human settlements. Although the market forces affecting the value of land and buildings should be an important factor in urban planning, they should not be the dominant factor. The implication of this is that an agency responsible for both urban planning and valuation may have difficulty in objectively evaluating market evidence, when that evidence conflicts with planning goals.

d. A New Agency : A new agency could be created to avoid the disadvantages of assigning the responsibility for valuation to an existing organization, including the negative beliefs held by others about it. A question to be resolved is whether valuation should be the agency's only function or whether it should have broader responsibilities for cadastral record systems (cadastral maps, ownership registers, and various other registers). A number of countries have established valuation services that prepare value estimates for disposition of surplus land and buildings, compulsory purchase, and other purposes in addition to taxation. When the immovable property tax has been a local tax, securing sufficient funding for regular revaluations has been a problem.

A new agency would have to find its place in the formal and informal governmental power structure in Armenia. Whether it

would exceed in establishing its credibility and an ability to command sufficient resources is difficult to say.

The Tax Inspectorate perceives several advantages to a new agency. One is the recognition that property owners (taxpayers) have conflicting interests, namely to understate values for tax purposes and overstate values for loan collateral and insurance purposes. As the government has interests in these areas, an independent valuation service would seem logical.

e. Ministry of Agriculture : Although the Ministry of Agriculture now is responsible for the cadastral values used in the taxation of agricultural land, it can be eliminated as a candidate for the agency responsible for valuation of land and other taxable property. Although its experience is valuable, the Ministry has no experience with valuation of urban land and buildings or of tax administration. However, the Ministry should remain responsible for determining soil classifications, studying agricultural commodity prices and production expenses, and providing the valuation agency with models for estimating basic agricultural land values.

The Ministry of Agriculture also suffers from an "image" problem: that of being unconcerned about urban problems. The converse may be a problem as well: urban-oriented organizations may not have a sufficient appreciation of agricultural issues.

f. Ministry of Finance : I have not had meetings with the Ministry of Finance, so I cannot evaluate its suitability as a home for a valuation service. Suffice it to say that based on experience in other former socialist countries, this possibility should not be ignored.

## B. COORDINATION

The length of the list of organizations identified in the previous section clearly demonstrates that the agency given the responsibility for valuation chosen will have to rely on the cooperation of other organizations. A means of coordinating the activities of the organizations involved will need to be developed. A single organization or official could be given full authority over all the other organizations, but this approach is not likely to succeed. A more practical approach is to create an interagency committee. The Armenian government has drafted an order which, if given, would create a working group designed to coordinate the activities of the various organizations involved.

I have recommended a slightly different interagency approach based on U.S. experience.

### 1. The Armenian Working Group Proposal

The proposal of the Government Department of Urban Policy is to make the State Committee on Architecture the head of a small, manageable cadastral working group. Although the group would be expected to seek out the views of affected organizations, it would have broad decision-making responsibilities. It would derive its authority from the state minister issuing the order. Under the proposal, the day-to-day work of the group would be delegated to AURI. The group's initial functions would be to:

- Clarify starting prices to help the Tax Inspectorate implement the property taxes.
- Develop the program for creating a cadastre and sort out organizational responsibilities. This is seen as the most difficult issue, as organizations have similar interests resulting in duplication of work. The approach is to identify possible organizations and create a short list.

Achieving the second objective would require the working group to identify organizations that might have a role to play and classify them according to the importance of their role. Important organizations would include those identified above plus the following: the Government Department of Urban Policy, the Ministry of the Economy, the Ministry of Justice, Armgeodesy (for base maps), and the city departments of architecture. Additional organizations would be identified. The plan is to assign each organization specific responsibilities so that duplication would be avoided. A difficulty is deciding which organization among organizations with similar interests should be made responsible for a particular task.

The intent of the Armenian proposal is to give the working group the power to "control" or direct the affected organizations so that objectives are achieved. Although the simplicity and directness of the proposal is appealing, its practicality is open to question given the lack of interagency communication and cooperation now.

### 2. An Alternative Strategy

October 1994 draft

I have recommended an alternative approach designed to address the political realities of bureaucracies that lack strong incentives to cooperate: an interagency committee whose chief function is to provide a forum for communications among interested organizations, each of which has roughly equal standing. The goal of the committee would be to seek workable consensus on the issue under study. Such committees have been used in the United States to deal with the creation of multipurpose information systems in which all involved organizations willingly participate.

I have recommended that a representative of the Government Department of Urban Policy serve as chair of the proposed committee so that committee recommendations can receive prompt government attention. I believe that making the AURI the secretariat makes good sense; the committee will need expert assistance in developing proposals for discussion. In addition to the recommendations identified above, the committee might also have representatives from private sector industry groups.

Of course, there is no guarantee that each organization will participate in good faith or that the committee will be able to find a consensus. Moreover, committees are famous for talk but little action. However, if the participants communicate their organizations' concerns effectively and if the participating organizations are committed to problem solving, the chances of success are good. In the parlance of U.S. practice on negotiations, the objective is to create "win-win" situations.



## V. RESOURCE REQUIREMENTS

Securing sufficient resources will be crucial to the success of efforts to create a fiscal cadastre and introduce taxes on land and other property. Resource requirements must be estimated before realistic budgets can be developed. It will be necessary to obtain funding, develop staff, and acquire facilities and equipment. These tasks will be difficult in Armenia because of a lack of relevant prior experience and because of economic uncertainties, including inflation. The fact that the property tax would be an entirely new tax provides another complication. The costs of setting up systems and administrative structures initially will be greater than revenues. Consequently, funding must come from other sources at first. Arrangements for technical assistance should be made.

[try to develop phased estimates.]

### A. FUNDING

Regarding funding, it will be necessary to develop and secure approval of project and operational budgets providing for regular and temporary employees, office facilities and equipment, any computer systems, transport, forms, and so forth. Appropriate sources of funding should be identified (e.g., from government budgets, proceeds from privatization, sales of products and services, grants).

### B. STAFFING

Attracting and retaining sufficient qualified staff will be crucial to the success of the implementation program. Staff costs can be anticipated to be the greatest single element of the budget of [the property tax administration]. (In the United States, for example, expenditures for staff salaries and benefits usually constitute 80 percent or more of total expenditures for property tax administration.) Staffing requirements will depend on such factors as the amount of work to be performed, how that work is organized, and available technology.

The [property tax administration] will need managers, valuers, statisticians, computer system analysts and programmers, computer technicians, mappers, public relations specialists, legal advisors, secretaries, clerks, and others.

#### 1. Qualifications

The qualifications required for a job depend, of course, on the nature of the work to be performed. A management challenge is harmonizing work with the qualifications of each member of the staff.

Management personnel in the property tax administration have responsibilities beyond valuation. They are responsible for leading and personnel management. Some will be involved in planning, budgeting, and project management. Managers must be able to communicate effectively with officials in all branches of government, with journalists, and with property owners and business leaders.

Modern mass valuation techniques require valuers with knowledge of mathematics, economics, and statistics, as well as knowledge of valuation principles and computer-assisted mass valuation techniques. This generally requires well-educated valuers, such as those with university degrees in an appropriate field. Experience with immovable property markets also is valuable.

Many employees of the [property tax administration] will have regular contact with the public. As public servants, they need to be pleasant in their dealing with the public and be willing to help people understand the property tax. The staff also should be able to remain calm and tactful when dealing with angry taxpayers.

## 2. Staff Size

[provide more illustrations.] Estimating the required number of staff involves analyzing the amounts and kind of work to be done, the time available to do the work, and production rates. The basic relationship between these factors and the number of people required for a job is

$$S = (PxR)/T,$$

where  $S$  is the number of staff positions needed,  $P$  is the measure of the work to be done (such as the number of properties to be valued or inspected),  $R$  is the production rate, and  $T$  is the time available. For example, the number of valuation positions required to value 120 farms in a 220 work-day year is three (rounded), if one valuer can appraise five farms in a day. ( $S = [120 \times 5] / 220 = 2.7$ , rounded to 3.) Estimates of staff requirements—or time requirements—should consider time spent in each activity, including training and travel. Estimates of field work

should consider time lost to inclement weather, power failures, and other work interruptions. Production rates should vary with the type of activity and the density and complexity of properties.

Production rates can be developed by analyzing actual work performance. The rates should be based on typical achievements, not the rates of the best or worst workers. Production rates should be continuously monitored and adjusted as necessary. Production rate data also can be used to evaluate staff efficiency.

For most planning and budgeting purposes, available time is measured in terms of the number of work days (or hours) in a year (say, 220 days to allow for weekends, about ten days for holidays, and about thirty days for vacations and sick leave).

Staffing benchmarks can be developed from surveys. A starting point might be one person for every 2,500 properties. This benchmark is based on surveys of property tax administrative agencies in the United States. Of course, individual agency ratios varied considerably. Smaller agencies had lower ratios (1:1,000 to 1:1,500) and larger, higher ratios (1:3,000 to 1:3,500). Factors that affect the ratios include the level of staff training (better trained staff were more productive) and the extent of computer use.

A policy of making maximum use of computers and other technology will produce better results in the long run than a policy of full employment. Full employment policies often result in low productivity, demeaning work, poor morale, and poor performance. Opportunities for petty corruption increase. The end result is a general discrediting of government.

### 3. Staff Service Costs

The cost of staff services simply is the sum of the products of numbers of positions in each salary category and the salary for that category plus the costs of benefits, such as insurance and pensions. In a market economy, staff salaries and benefits must be competitive with similar positions in government and in business to attract and retain qualified personnel and to protect investments in training, which are lost if qualified personnel leave for better paying positions.

*Observation: government salaries in Armenia and in other former communist countries appear dangerously*

*low, making retention of qualified people very difficult and inviting corruption.*

C. COMPUTING RESOURCES

Computer support is a virtual necessity in contemporary property tax administration--provided that there is an uninterrupted source of electricity and that equipment can be serviced and programs maintained. Computing resources include hardware, software, and the personnel responsible for system analysis, system design, programming, and computer operations.

Computers eliminate much of the need to transcribe data manually; reduce the need to maintain manually prepared work logs, batch reports, and other reports designed to produce an audit trail; and reduce routine use of photocopies. They reduce the time spent on mechanical, repetitive processes such as producing tax rolls and making valuation calculations. Data can generally be made more accessible and more secure. Use of computers can improve efficiency. Computers can help increase valuation accuracy by expanding analytical capabilities.

The management of the [property tax administration] should attempt to obtain the greatest feasible degree of computer support in the areas of data management, sales analysis, valuation, and administration. [refer to mgt section.]

It will be necessary to determine the feasibility of computerization. Environmental conditions and the availability of equipment service personnel should be considered along with technical feasibility.

*Note: The State Tax Inspectorate plans a central apparatus local area network and eventually a wide area network that includes its regional offices. It is acquiring about fifty 386 personal computers (PCs) from the World Bank. Software needs seem not to have been determined, although software and training is covered by the World Bank loan. Giprozem has two PCs, but these are little used.*

computerized management information system to supplant the current paper system as it is difficult to ensure that all regional offices report all tax receipts.

computer-assisted mass valuation system

## tax billing and collection system

[rework or delete.] The first requirement of computerization is to get data into computer-readable form. Computer-assisted mass appraisal requires property characteristics data in computer readable form. On-line data entry and retrieval offer several important advantages in assessment operations.

### D. OFFICE FACILITIES, FURNITURE, EQUIPMENT, AND TECHNICAL LIBRARY

The [property tax administration's] offices should be professional in appearance and provide a good working environment. Space requirements depend on the size and composition of the staff, the work they perform, and on the technology employed. The analysis of space needs should consider requirements for public contact, files and storage, conferences and training, mapping and drafting, and office machinery.

The [property tax administration] ultimately will require a variety of office furniture and equipment, such as financial and ordinary calculators, measuring instruments, cameras, clipboards, micrographic equipment, word processing equipment and printers, photocopiers, telephones, facsimile machines, mailing machines, typewriters, dictating equipment, filing cabinets, and map cabinets and racks.

The [property tax administration] will require access to the latest thinking and techniques in the field. Publications and other technical materials should be organized in a library. The International Association of Assessing Officers can help with setting up the library and identifying the types of publications that the library should contain.

## VI. TRAINING STRATEGY

[incomplete chapter.] Training needs will range from introductory courses on property taxation such as are offered by the Organisation for Economic Cooperation and Development to specific training in Armenian procedures.

Procedural training materials and programs will need to be developed. Subjects to be covered include: basic administration, registration of subjects and objects, valuation, and tax administration. Needs will evolve as progress is made.

field staff will need instruction in current administrative procedures and in use of computer systems as they are developed in the current World Bank program.

ANNEXES

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Gagik (sp?) Giorjyan, First Deputy

Levon J. Eloyan, Vice Chairman (favorable impression)

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plus plus

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B. REFERENCES

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C. MISCELLANEOUS INFORMATION

1. Political and Administrative Structure

The territory of the Republic of Armenia includes seventy inhabited areas. These areas comprise 43,900 hectares. Yerevan alone comprises 16,500 hectares. Of these, twenty-seven are classified as a city or town. The balance are classified as villages.

The State Tax Inspectorate has a central apparatus and fifty-one regional offices (one in each municipal authority). The central apparatus has an inspectorate division (which presumably supervises the regional offices and a methodology division. The methodology division's authorized complement recently was increased to forty-three. There also is an information systems division.

2. Valuation and Tax Administration Work Load

Note: Much of the following is from Mousheghian and Soghomonian (1994).

The estimated number of land plots subject to registration is 750,000 (assuming that the average plot is 1,000 square meters). There are an estimated 80,000 gardening plots, apparently not included in the land plot estimate.

The estimated number of individual residential buildings is 300,000; multi-story residential buildings, 20,000; and other types of buildings, 20,000. The number of apartments (to be privatized) is expected to total 500,000.

Urban areas (urbanized settlements) to be mapped comprise 62,000 hectares. Villages and other developed lands comprise 14,000 hectares.

Eligible agricultural land taxpayers include registered agricultural land owners, 28,000 collectives, and family house plots. In addition, there are 1,100 state enterprises.

3. Cost Estimates

October 1994 draft

Based on French estimates of the cost of a cadastral system for Saint Petersburg, Mousheghian and Soghomonian (1994) estimate the cost of base mapping to total \$5 million (\$4 million for urban areas and \$1 million for villages). They estimate the cost of compiling cadastral maps for 76,000 hectares to total \$25 million (based on a cost of \$300 to \$350 per hectare).

Software for digital maps and a GIS is estimated to cost \$5 million to \$6 million (based on \$2 to \$3 per capita).

The total of the identified costs is about \$35 million. The total excludes data conversion, training, and annual operations.

Mousheghian and Soghomonian (1994) propose to allocate costs as follows:

Yerevan and other large cities	40%
Other urbanized settlements	40
Rural settlements and other territories	20